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Nurses' Perception of Privacy in the NICU and GCU: A Qualitative Descriptive Study

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Abstract

Purpose: The purpose of this study was to identify the perceptions that determine the nursing practices of nurses working in NICU and GCU to protect the privacy of the affected children and their families, and the perceptions that arise in relation to their practices. Further to obtain information on current issues and future suggestions for nursing practice. **Method**: Semi-structured interviews were conducted with six nurses of Clinical Ladder I or higher currently working in the NICU and GCU, and content analysis was conducted. **Result**: The study identified five categories, 16 subcategories, and 63 codes: "keeping in mind to act in accordance with the characteristics of the NICU and GCU", "trying to secure a space only for the affected children and families depending on the situation", "feeling the need for consideration for the affected children and families", "feeling puzzled and frustrated through the relationship with families", "having a dilemma between the environment they want to realize for the affected children and families and the fact that it cannot be realized". **Conclusion**: In considering nursing care in NICU and GCU, including consideration for privacy, the need to reflect on daily nursing care and share it with other staff members was suggested.

Keywords

Privacy, Family Nursing, Neonatal Intensive Care Unit, Growing Care Unit, Environment

1. Introduction

Both neonatal and infant mortality rates in Japan have remained very low in international comparisons due to advances in neonatal and perinatal care [1]. While medical advances have saved many lives that were once unsalvageable, in recent

years, the percentage of low birthweight (<2500 g), very low birthweight (<1500 g), and extremely low birth weight infant has been increasing as the number of births has remained flat or declined [2]. Furthermore, in recent years, there has been an increase in the number of specific pregnant women and young pregnant women as well as an increase in older births due to later marriages, resulting in an increase in social high-risk pregnant women in addition to medical high-risk [3]. Thus, the number of newborns requiring treatment and systemic management immediately after birth is increasing, and the importance of Neonatal Intensive Care Units (NICUs) and Growing Care Units (GCUs) is growing.

In healthcare, nurses are responsible for protecting patient privacy, as the Code of Ethics for Nurses clearly states that they must maintain patient confidentiality and handle personal information appropriately [4]. Nurses' protection of patients' privacy is also a matter of protecting patients' dignity and is considered a component of their social responsibility as nurses [5] [6]. Furthermore, since it has been reported that nurses consider not only patients but also their families as objects of care and practice nursing acts to protect the privacy of the families [7], nurses play a role in protecting the privacy of patients and their families in hospital wards and other medical settings. However, privacy-conscious words and actions can vary depending on the situation in which the nurse is placed, and furthermore, they rely heavily on judgment based on the nurse's personal values and experience. Therefore, depending on the nurse's actions, patients may perceive that their privacy has been violated [8] [9].

Privacy-conscious nursing practice is required, given that the privacy of patients and their families admitted to NICU and GCU can be easily violated by the open floors environment and the words and actions of nurses. However, few studies have focused on privacy in NICU and GCU [10] and it is unclear what nurses are doing to ensure patient and family. It is not clear what nursing practices nurses use to protect the privacy of patients and their families. Since moral sensitivity and perceptions are associated with nurses' nursing practice [11], and furthermore, the difference between nursing or work is whether the act is a practice guided by perceptions [12], it is important to grasp and understand nurses' perceptions in order to clarify their practice.

2. Method

2.1. Aim

The purpose of this study is to identify the perceptions that determine the nursing practices of nurses working in NICU and GCU to protect the privacy of the affected children and their families, and the perceptions that arise in relation to their practices.

2.2. Study Design and Setting

This study is a qualitative descriptive study using semi-structured interviews. And this was conducted from October 2022 to November.

2.3. Subject of Study

The subjects were nurses who were currently working in NICU and GCU and had completed Clinical Ladder I. After obtaining approval from the University of Tsukuba Medical Ethics Committee (Notice No. 1816), we requested research cooperation from one facility, the Comprehensive Perinatal Maternal and Child Health Center in Ibaraki Prefecture. At the same time as recruiting the target facilities, a poster inviting subjects was posted on the website of the University of Tsukuba's Graduate School of Developmental Nursing. The poster clearly indicated the contact information for the study and asked eligible subjects to contact the reference if they wished to participate.

2.4. Survey Contents

2.4.1. Subject Attributes

Before the interview began, the subjects were asked to fill out a face sheet. The questions on the face sheet included the following items: age, years of nursing experience, years of experience in NICU and GCU, current ladder, and number of beds in the NICU and GCU where they work.

2.4.2. Interview Contents

The interviews were semi-structured interviews lasting about 30 minutes, following an interview guide. Prior to the start of the interview, the interviewer was asked to recall the pre-infectious disease epidemic, given the current situation in hospitals with visitation restrictions. The interview guide consisted of a set of items asking how they perceived privacy in the NICU and GCU, with supplementary questions as needed.

2.4.3. Conducting Interviews

The interviews were conducted based on the interview guide and face sheet. And the interviews were conducted one-on-one between the researcher and the subject. The method of implementation was adjusted according to the subject's preference, with the subject choosing either face-to-face or online (ZOOM). The interviews were recorded and videotaped only when the subject agreed to be recorded on an IC recorder or on ZOOM.

2.5. Analysis Method

This study was based on the method of Krippendorff, K. (1980) and content analysis [13].

For content analysis, a verbatim transcript was first created from the narratives obtained from the interviews. From the verbatim transcripts, the subject's statements were extracted verbatim and coded after marking the content statements related to "the perception that determine the nursing practice that nurses perform to protect the privacy of the affected children and their families, and the perception that arise in relation to their practices". Subcategories were then created by grouping together codes with similar semantic content from among the codes. After naming the subcategories, the similarity of the codes comprising each sub-

category was checked, and similar subcategories were grouped together to create a category. After naming the categories, we checked the similarity of the subcategories that make up each category.

In analyzing the data, I was supervised by a faculty advisor who is well versed in qualitative research and worked to ensure accurate interpretation of the data. In addition, we asked the subjects to confirm the results of the analysis as member checking, and all six subjects responded. Based on the comments and feedback from the subjects, we made modifications as necessary to ensure the reliability and validity of the data.

2.6. Ethical Consideration

This study was conducted with the approval of the University of Tsukuba Medical Ethics Committee (Notice No. 1816).

It was clearly stated in the explanatory statement that participation in the study was voluntary and that no disadvantage would be incurred by not giving consent to the study. And if the subject became ill during the 30-minute interview, we decided whether or not to continue the interview, and we ensured that we did not force the subject to answer any questions that the subjects were not comfortable answering or did not want to answer. IDs were assigned to each subject, and data such as recorded data and verbatim transcripts were managed by creating a consolidated anonymization correspondence table. Information containing personal information was deleted, and management and analysis were conducted with sufficient care so that individuals could not be identified.

3. Result

The subjects were six nurses of Ladder I or higher currently working in NICU and GCU. When six subjects had been interviewed, the date reached the point of saturation. So, we did not interview further subjects.

Table 1 describes Attributes of the subjects. From this table, it can be seen that the average number of years of nursing experience was 13.1 (4.5 - 24) years, and the average number of years in the NICU and GCU was 7.0 (4 - 16) years. The wards where the subjects worked had an average of 9.5 NICU beds and an average of 13.3 GCU beds.

Table 1. Attributes of the subjects.

ID	Age (generations)	Years of nursing experience (years)	Years of NICU/GCU experience (years)	Ladder	NICU Number of beds (beds)	GCU Number of beds (Beds)	Interviews Time (minutes)
1	20	5	5	III	9	18	25
2	40	23	16	V	15	9	31
3	40	24	6	IV	9	18	34
4	20	4.5	4	II	6	6	30
5	30	17	6	IV	9	18	31
6	20	5	5	II	9	11	32

Interviews were conducted for an average of 30.5 minutes (25 - 34 minutes), and the interview methods were three face-to-face and three online using ZOOM.

After analyzing the verbatim transcripts obtained from the interviews, 63 codes, 16 subcategories, and 5 categories were extracted regarding the perception that determine the nursing practice that nurses perform to protect the privacy of the affected children and their families, and the perception that arise in relation to their practices.

3.1. Keeping in Mind to Act in Accordance with the Characteristics of the NICU and GCU (Table 2)

The category "keeping in mind to act in accordance with the characteristics of the NICU and GCU" indicates that nurses are mindful of privacy in accordance with the different environment of the NICU and GCU from that of general wards, such as open floors with no partitions and close bed distances due to the presence of medical equipment and monitors.

Table 2. Keeping in mind to act in accordance with the characteristics of the NICU and GCU.

Category	Subcategory	Code	ID
Keeping in mind to act in accordance with the characteristics of the NICU and GCU	Since the environment has no partitions, try to block the view of the surroundings	If there are external surface deformities, position the bed where other family members do not pass by frequently.	3
		During highly invasive care, pull back the partitions before taking care of the patient because of the surroundings.	1
		When flapping around during procedures such as unplanned extubation, sudden changes, hospitalization, etc., be aware to draw the curtains to keep out of sight of the surroundings.	2, 4
		Try not to be seen or heard by other family members.	1, 2, 5
		As part of the ward's policy, educate families at orientation not to carelessly look at or peek at other patients.	3
	Pay attention to conversations among staff and family members because the distance between beds is close enough to hear surrounding sounds.	I try not to talk with other nurses about things that are not necessary, regardless of whether or not there are other mothers around.	1,3
		Because of the close distance between beds, I am conscious of speaking in a voice that reaches only the receiving family members.	1, 4
		I try not to talk except to identify myself in a loud voice.	5
		Respect privacy by moving important discussions to a private room or talking away from the affected child.	2, 5, 6
		If the family structure is complex, be careful about the words you use and the stories you tell.	1, 3
		If, in a conversation with the mother, there are words or actions that concern the surroundings, try not to talk about them in depth at that moment, but talk about them at another time.	6
		Keep in mind that there are other family members around on one floor, and talk to them without raising your tone of voice.	2
		During family visits, be careful to say the name of the affected child as little as possible and to rephrase it with the bed number.	5
		Conduct the rounds and conferences in a situation where the family is not visiting, so that the family cannot hear the content of the rounds and conferences.	5, 6

This category was generated from two subcategories: <since the environment has no partitions, try to block the view of the surroundings>, and <pay attention to the conversations among staff and family members because the distance between beds is close enough to hear surrounding sounds>.

"*If there is a bit of invasive care, you know…if there is a wound or bowel protrusion or something that is a bit difficult to do or see when other patients* (*family members*) *are present, I pull back the partitions before I care for them.*" (ID1)

"*Sometimes during family visits, there are a bit busy with other babies being treated or hospitalized, and the nurses and doctors sometimes get flustered, but at those times I think the family members inevitably look at me as if I am having a hard time, so I use curtains to separate them.*" (ID4)

3.2. Trying to Secure a Space Only for the Affected Children and Families Depending on the Situation (Table 3)

The category "trying to secure a space only for the affected children and families depending on the situation" indicates that the subjects were aware of the need to provide space for only the affected children and families depending on the situation with each family, such as sometimes creating space for only the family and sometimes intentionally engaging in an open floor.

Table 3. Trying to secure a space only for the affected children and families depending on the situation.

Category	Subcategory	Code	ID
Trying to secure a space only for the affected children and families depending on the situation	Being aware of creating a space just for the family.	Tape separates the floor to ensure personal space for the affected child and family.	4
		Place partitions or move to a private room so that the family can have their own space without worrying about their surroundings.	3, 6
		At times when the mother is not receiving the child well, surround her with partitions to make it easier for her to express her feelings.	6
		I am conscious of refraining from making statements that would identify the specific name of the disease so as not to provoke feelings of concern for the babies around them.	3
	Devising responses so that the family can spend time without worrying about their surroundings.	She does not compare her interactions with families to those of other affected children because generalities do not necessarily apply to all children.	3
		If a family member makes a comment about another patient's child, respond by standing or talking to the family member.	6
		Although your child is the most important, because the beds are open, you may be concerned about what others are saying, so make sure all staff members respond in a consistent manner.	3
		The narrow space between the beds makes it easy to see other patients, so be considerate and talk to family members who are concerned about their child.	6
		In situations that may cause anxiety to the family members who are visiting, consider stopping the visit as an option.	1, 5
	Being aware of the characteristics of the ward's open floor space when contacting with the family.	Not necessarily separating them with a partition, but rather by leaning in close to them and interacting with them in a way that allows them to express their feelings in their own words.	3
		The open floor makes it easier for the family to feel secure.	3
		Both the nurse and the family can catch each other easily.	3
		The open floor makes it easier for mothers and fathers to build a relationship with each other.	2

This category was generated from three subcategories: <being aware of creating a space just for the family>, <devising responses so that the family can spend time without worrying about their surroundings>, and <being aware of the characteristics of the ward's open floor space when contacting with the family>.

"*I am conscious of trying not to say anything that could identify the specific name of the disease. Try not to mention anything that could identify the disease.* (*Some omitted.*) *With so many babies in the hospital, sometimes there is a mix of different families coming to the ward to visit and participate in care, so it is natural to wonder what kind of babies are around, not just your own child. It also means that there may also be desire not to provoke such feelings or to let other people know about some of the things you do.*" (ID3)

3.3. Feeling the Need for Consideration for the Affected Children and Families (Table 4)

The category "feeling the need for consideration for the affected children and families" indicates that there are situations in daily work where subjects feel that the privacy of affected children and their families is not protected, or that the words and actions of staff, including themselves, lack consideration for privacy, and that they perceive the need for consideration.

This category was generated from the following five subcategories: <because of the open floors and the close proximity between beds, it is easy for people around us to know the personal information of the children and their families>, <I sometimes feel that the words and actions of other staff members and physicians lack consideration for privacy>, <I sometimes need to be careful about what I say and do>, <I think there is little awareness of privacy for affected children and their families in daily work>, <at times, the relationship between nurses is more important than privacy considerations>.

"*Since it is an open floor and the bed itself is very small, there are many times when I feel that privacy is not protected in the environment. Especially in the presence of many family members, there are times when I feel that the physical space is not protected.* " (ID3)

"*I thought at the time that since we work so hard to cope with sudden changes, the degree to which we are aware of the privacy of children on a daily basis is a major factor in whether or not we are able to give consideration to their privacy.* " (ID2)

3.4. Feeling Puzzled and Frustrated through the Relationship with the Families (Table 5)

The category of "feeling puzzled and frustrated through the relationship with the families" indicates that the subjects feel difficulty in dealing with the families in a privacy-conscious manner and that they feel frustration and resistance in dealing with the families of the patient due to their consideration of the surroundings.

Table 4. Feeling the need for consideration for the affected children and families.

Category	Subcategory	Code	ID
Feeling the need for consideration for the affected children and families	Because of the open floors and the close proximity between beds, it is easy for people around us to know the personal information of the children and their families.	I feel that privacy is not protected as a physical space when many family members come to visit.	3
		I think that the distance between the beds is so close that I can hear the conversations of the neighbors, which may increase the anxiety of the family if the child next to them and their own child have the same disease.	5
		Although I understand the importance of monitoring, I feel that privacy is not protected because anyone can see the monitor displaying the name and ECG of the hospitalized patient.	4, 6
		While telling families not to look at other children, they feel uncomfortable about being in an environment where they can see.	5
	I sometimes feel that the words and actions of other staff members and physicians lack consideration for privacy.	I sense a problem with staff who are vocal and irritable and whose irritability is visible in their hands.	6
		I feel that privacy is not protected when staff members talk about another patient's name in the presence of other family members.	6
		Some staff members who have experience only in the NICU and GCU wards are divided from adults, for better or worse, but I think it is better to recognize that privacy is a basic requirement for both adults and children.	5
		The staff's familiarity with the environment sometimes makes them feel that the setting is inadequate, such as the way the partitions are set up when feeding directly at the cot side.	2
		I heard a doctor talking about discharge at the bedside, and another family member expressed concern about their child's discharge, and I felt the need to be considerate.	4
		I thought I needed to pay attention to the fact that when I provided care in the presence of other family members, I did not cover the child with a towel because he/she could not say anything.	6
		In the case of doctors talking to each other about newborns in the maternity ward, the mothers in the same room may hear what they are saying, so I think families should be careful during visits	5
	I sometimes need to be careful about what I say and do.	I acknowledge that there is a part of me that is numb to the fact that nurses say and do things to each other without regard to their surroundings, and I am concerned that I may be one of them.	1
		I feel that it is a problem that the family's character comes up as a topic of conversation in the break room, but I have talked about it myself.	5
		I try not to use negative language about my family members, but I have to be careful because I sometimes empathize with them when I have experienced things firsthand.	5
	I think there is little awareness of privacy for affected children and their families in daily work.	I think the question is how much awareness we can have about privacy for hospitalized patients on a regular basis, and whether we can give consideration to privacy in the event of a sudden change in circumstances.	2
		Through the interviews, I realized that privacy for the patients and their families is not a high priority in my daily work, and I would like to make use of this opportunity in my daily discussions.	2
	At times, the relationship between nurses is more important than privacy considerations.	I would rather prioritize human relations among nurses than privacy concerns.	1
		I feel that the behavior of senior nurses and other staff members is problematic, but I am reluctant to pay attention to it.	4

Table 5. Feeling puzzled and frustrated through the relationship with the families.

Category	Subcategory	Code	ID
Feeling puzzled and frustrated through the relationship with the families	I am at a loss to judge the extent to which my behavior constitutes consideration for privacy.	I was not sure how to respond when the mother of a baby born small asked me about the weight of another baby.	1
		I consult senior nurses because I cannot judge alone how much caution to take in family conversations.	1
	I feel difficulty in saying and doing things to the family that consider privacy.	I had an experience where I thought I was speaking in a voice only the family could hear, but it did not come across well and shocked them.	1
		I asked a question to a mother immediately after giving birth, but the mother herself felt burdened.	4
	I feel frustration and resistance in not responding honestly because I am required to be considerate to my surroundings.	I want to share the joy of increased direct motherhood with my family, but I feel a sense of reservation toward other receiving families.	4
		I think that names are the first precious gifts that babies receive from their parents when they are born, so I want to call them by their first names except in special cases, while I feel uncomfortable calling the affected child by his/her name from the standpoint of privacy.	6

This category was generated from the following three subcategories: <I am at a loss to judge the extent to which my behavior constitutes consideration for privacy>, <I feel difficulty in saying and doing things to the families that consider privacy>, and <I feel frustration and resistance in not responding honestly because I am required to be considerate to my surroundings>.

"*If the mothers are talking to each other, I don't know…hmmm…until attention…is it ok? No, but…I might consult with my senior once and get advice from that senior. Well, I might not be able to judge alone what level is acceptable….*" (ID1)

"*When you feed a child directly, you add milk to the bottle, because sometimes one of the patients is not able to drink at all and another is able to drink. But in reality, we both want to be happy when one of us is able to drink, don't we? I want to say to the mother, 'You were able to drink,' but if the other child is unable to drink, I have no choice but to keep my voice down.*" (ID4)

3.5. Having a Dilemma between the Environment They Want to Realize for the Affected Children and Families and the Fact That It Cannot Be Realized (Table 6)

In the category of "having a dilemma between the environment they want to realize for the affected children and families and the fact that it cannot be realized", although the subjects believe that it is not easy to realize an ideal environment given the role of NICU and GCU, where the first priority is to save the life of the patients, they indicated that they have some points to improve and hope to make the environment of the NICU and GCU where they are currently working better for the affected children and their families, including in terms of protecting their privacy.

Table 6. Having a dilemma between the environment they want to realize for the affected children and families and the fact that it cannot be realized.

Category	Subcategory	Code	ID
Have a dilemma between the environment they want to realize for the affected child and family and the fact that it cannot be realized.	Feeling conflicted between ideal and reality.	I would like to be able to spend my precious newborn time alone with my family without being watched by staff or others, but I think there are some difficulties considering my child's condition.	1
		We think that having a private room and a larger distance between beds would allow the family to have their own space, but we do not think this is realistic.	4
		It is important to have a space where people do not compare themselves with others, but it is also important to have a space where family members do not feel lonely, and I find it difficult to balance the two.	4
	Wanting to create a space and atmosphere where the affected children and family feel safe.	We want to create a space where the baby and family can feel as if they are spending time together as a family, even though it is in a hospital room.	2, 3
		We see sound-conscious spaces as ideal.	2
		I want to value space and atmosphere more than visual blockage.	2
		In childcare guidance, we want to provide a space where the family can simulate life after discharge.	3
		I think that an environment that can be adjusted flexibly can provide good nursing care for the patients and their families as they are hospitalized for long periods of time and the separation of mother and child increases.	6
	Wanting to create an environment to protect the privacy of the affected children and families.	The semi-private room will allow the family to be close to the affected child while the family itself can relax and care for the child in privacy.	3
		If curtains can be lowered between the beds, the curtains can block the view of the next bed, but the nurse's station can see them, so I think this would be the most concessive for both the family and the medical staff.	5
		The current beds are small and the distance between beds is close, so I hope the expansion will create an environment where it will be difficult for surrounding voices to enter the room.	5
		The family members are in the gap between the monitor and swing rack, so if the distance between the beds is wider, they can take time to relax as a family.	6

This category was generated from three subcategories: <feeling conflicted between ideal and reality>, <wanting to create a space and atmosphere where the affected children and families feel safe>, and <wanting to create an environment to protect the privacy of the affected children and families>.

"*Rather than having the parents do various things in a small environment, if we can create a space that is a little closer to their home environment, such as a GCU where they can experience a simulated baby bed here and diapers there, the environment will be even better. I think it would be a better environment.*" (ID3)

4. Discussion

In order to protect the privacy of the affected children and their families, the nurses were aware that they should "keeping in mind to act in accordance with the characteristics of the NICU and GCU" and "trying to secure a space only for the affected children and families depending on the situation" in their nursing

practice. On the other hand, the nurses felt "feeling the need for consideration for the affected children and families" in their daily work, and that they felt "feeling puzzled and frustrated through the relationship with the families" due to privacy concerns. Furthermore, it became clear that each nurse was aware of " having a dilemma between the environment they want to realize for the affected children and families and the fact that it cannot be realized".

Therefore, the following sections will be divided into three themes based on the generated categories: 1) privacy in NICU and GCU, 2) nursing care for families in NICU and GCU, and 3) the environment of NICU and GCU.

4.1. Privacy in NICU and NICU

The subjects in this study were aware that NICU and GCU are different environments from general wards, such as open floors without partitions and narrow distances between beds due to the presence of medical equipment and monitors, and they tried to protect the privacy of the affected children and their families by "trying to act in accordance with the characteristics of the NICU and GCU". On the other hand, they were aware that, in the course of their daily work, <Because of the open floors and the close proximity between beds, it is easy for people around us to know the personal information of the children and their families.> and that <I sometimes feel that the words and actions of other staff members and physicians lack consideration for privacy.> This is due to the fact that NICU and GCU are environments where the treatment of the patient should be the top priority, and care and treatment must be provided regardless of the family's visiting status or time. In such situations, it is not always possible to completely block the eyes of other families who come to visit or to prevent them from seeing or hearing information about the children. Therefore, it can be said that although the nurses themselves were consciously acting to protect privacy, sometimes there were tasks that should be prioritized over privacy considerations, and they recognized situations in which privacy was not adequately protected and "feeling the need for consideration for the affected children and families". This interpretation is consistent with the results of a previous study [14], which found that, as in the NICU and GCU, nurses in ICUs that provide advanced intensive care to patients questioned the treatment-first ICU environment and the lack of patient privacy, while recognizing the need for that environment.

Furthermore, some of the subjects considered that children's privacy was not protected in response to situations where care was provided without covering them with towels. The perception that human dignity should be protected even for newborns who cannot express themselves verbally indicates that privacy protection is one of the ethical issues to be considered in NICU and GCU. NICU nurses face a variety of ethical challenges beyond the primary ethical issue of life-or-death decision making [15], and some previous studies report that care for the affected children is one of the dilemmas, as was the case for the subjects in this study [16]. Therefore, it is important to reaffirm that protecting the pri-

vacy of the children is the key to preserving the children's dignity, and it is important for the ward staff to be united in this recognition.

The subjects also recognized that they felt "feeling puzzled and frustrated through the relationship with the families" related to privacy and consulted senior nurses as a way to cope with this situation. Prior research has shown that when new nurses encounter ethical dilemmas, they only respond to them privately by consulting their supervisors or colleagues, and not systematically in public settings such as hospital-wide or ward conferences [17]. As with ethical dilemmas, it is difficult to make a judgement about family's involvement on the spot alone, since the acceptable level of privacy varies from person to person. Therefore, as an organizational effort, it is necessary to set up ward conferences to share awareness of problems and confusions held through everyday work and involvement with families.

Furthermore, one of the subjects recognized that <I sometimes need to be careful about what I say and do myself> and <I think there is little awareness of privacy for affected children and their families in daily work.>. If nurses can raise their awareness of ethical issues, dilemmas, and sensitivity to privacy through the previously mentioned conferences, and if they can reflect on their daily nursing care on a case-by-case basis, it can be expected to improve the quality of nursing care in the ward as a whole.

4.2. Nursing Care for Families in NICU and GCU

The results of this study showed that the subjects were conscious of <being aware of creating a space just for the family> in an environment where the words and actions of other patients, family members, and sometimes medical staff could be easily observed, and that they made "trying to secure a space only for the affected children and families depending on the situation" by using a stand to partition the space and talking to the families to prevent unnecessary information from entering the space. For mothers, the NICU is a "different space" where they do not belong, and it has been reported that they are always tense and aware of the presence of instruments through visual and auditory senses [18], so it is necessary for families to be aware of their children and to create a family-only space including them.

However, this study also revealed that open floors are not necessarily a negative aspect for families. In other words, the nurses themselves recognized the advantages of the NICU and GCU for the families, such as the sense of security of having more staff watching their children and the ability of mothers and fathers to build relationships with each other because of the open floors, and they made use of these strengths in their interactions with the families. In a previous study, it was reported that mothers of children admitted to the NICU "wanted to hear about the experience of raising a child born small" [19], which is consistent with the perceptions of the subjects in this study. Furthermore, it was revealed that the mothers of the affected children felt that there was an atmosphere in the

NICU where they were not allowed to talk to other mothers, and they felt lonely because they could only have a space to face their children [18].

Therefore, in order to secure space for the affected children and families, it is important to consider appropriate considerations for the families, recognizing that excessive partitioning in terms of privacy considerations may cause the families to feel isolated and that the NICU and GCU can be a place for peer support among family members when open floors are available.

4.3. Environment of NICU and GCU

The subjects of this study recognized that the NICU and GCU in which they currently worked had areas that could be improved to create a privacy-conscious environment for affected children and their families. Therefore, it can be said that they had the desire to <wanting to create a space and atmosphere where the affected children and family feel safe> and <wanting to create an environment to protect the privacy of the affected children and families> in the current NICU and GCU. On the other hand, the fact that they <feeling conflicted between ideal and reality> suggests that they were aware of the difficulties in overcoming these points for improvement and creating an ideal environment, considering the role of NICU and GCU, which should place the highest priority on saving the life of the patient.

Although each subject had a different image of the environment they wanted to create for the affected children and families, they had a common ideal of an environment where the children and families could spend time together, in keeping with the wishes of the family, who would normally have to spend their precious time with their children in the NICU and GCU immediately after the birth. The environment of NICU and GCU is under constant examination to achieve the optimal environment for the affected children and families, including the promotion of developmental care [20] and the comparison of the effects of open floors and semi-private room types [21]. In the future, further study is needed to add the perspective of privacy considerations to such optimal environment items, and the narratives from the subjects in this study are very significant.

In addition, the environment of the NICU and GCU made the subject resistant to dealing with the affected children and their families. This resistance may have arisen from the fact that the subject wanted to protect the children's privacy by referring to the children's name by their bed number, but also wanted to call the children by their name, which were gifts from their parents. The environment in which the nurses' words and actions could be seen and heard by those around them made the nurses hesitant to respond honestly, leading to a sense of frustration and resistance. Therefore, it can be said that nursing care in the NICU and GCU is related to the ward environment, and it is desirable to have a system that allows staff to share and consult with each other, given that not only the individuals involved but also other staff may feel the same frustration and

resistance.

Furthermore, while it has been reported that nursing practice in private wards is difficult to see among nurses [22], the NICU and GCU can be viewed as an environment where nurses can easily observe and learn from each other's nursing practice because of the open floor. Since the presence of senior nurses is one of the factors that improve skill acquisition and practical skills [23] [24], an environment where nurses can easily observe nursing practices performed by other nurses is thought to have a positive effect on nurses in terms of their personal growth. So, these findings suggest that the environment of the NICU and GCU, although difficult to protect privacy, may have a positive impact on families and nurses.

Finally, the results of this study indicate that the environment of the NICU and GCU has a significant bearing on the perception that determine the nursing practice that nurses perform to protect the privacy of the affected children and their families, and the perception that arise in relation to their practices.

NICU and GCU is a place where intensive care is provided with the highest priority of saving the life of newborn babies, and at the same time, that is a place where parents accept their children and form families, creating a very special environment in which normally conflicting aspects must be balanced. On the other hand, nurses in the critical care area have the role of advocating for those who receive medical care in a condition where they are unable to make self-determination and to maintain a basic life respected as a person in any condition [25]. Therefore, even in the special environment of NICU and GCU, nurses are required to protect the life safety of affected children and provide nursing care that is close to the affected children and their families. This study showed that consideration for privacy is an important underlying factor.

In the NICU and GCU, there are many situations that require consideration for privacy, such as responding to sudden changes, caring for affected children, and interacting with families, but these are often left to the judgment of individual nurses and passed off as casual situations. Prior research has shown the importance of discussing ethical issues that arise in the unique environment of the NICU [26], suggesting the need for staff to share not only ethical issues but also privacy-related awareness and confusion with each other in the future. By sharing information among staff with different experiences and values, privacy can be viewed from a new perspective, leading to clues for better nursing care. This will lead to the practice of privacy-conscious nursing care in the entire ward.

5. Limitations of the Study and Future Challenges

The small number of subjects in this study six and the limited interview time may have prevented us from eliciting sufficient narratives from the subjects, making it difficult to generalize the results as the perceptions of nurses working in the NICU and GCU. Furthermore, it cannot be denied that the results obtained in this study lacked accuracy in terms of memory and perception, since

the subjects were speaking in retrospect before the infectious diseases outbreak. In addition, given the situation where there are still restrictions on visits in hospital wards, it is not appropriate to apply the findings of this study to current nursing practice, and further investigation is needed. Specifically, we believe that by obtaining narratives from subjects at a larger number of facilities and by investigating changes in perceptions based on whether or not visitation restrictions are in place, we can gain a clearer understanding of nurses' perceptions of the current situation.

6. Conclusions

Five categories were identified as perception that determines the nursing practice that nurses perform to protect the privacy of the affected children and their families, and the perception that arise in relation to their practices. The following five categories were identified: "keeping in mind to act in accordance with the characteristics of the NICU and GCU", "trying to secure a space only for the affected children and families depending on the situation", "feeling the need for consideration for the affected children and families", "feeling puzzled and frustrated through the relationship with the families", and "having a dilemma between the environment they want to realize for the affected children and families and the fact that it cannot be realized".

In considering nursing care in the NICU and GCU, including consideration for privacy, it was suggested that it is necessary to reflect on daily nursing care and share it with various staff members.

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Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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